



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-26107; Project Identifier 2004-SW-30-AD]

RIN 2120-AA64

Airworthiness Directives; Carson Helicopters, Inc.; Croman Corporation; Sikorsky Aircraft Corporation; and Siller Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: The FAA is revising an earlier proposal for all Sikorsky Aircraft Corporation Model S-61 A, D, E, and V helicopters; Croman Corporation Model SH-3H helicopters, Carson Helicopters, Inc. Model S-61L helicopters; and Siller Helicopters Model CH-3E and SH-3A helicopters. This action revises the notice of proposed rulemaking (NPRM) by adding camshaft and gear housing part numbers that need to be marked and clarifying the applicability and certain compliance times. The FAA is proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since these actions would impose an additional burden over that in the NPRM, the FAA is reopening the comment period to allow the public the chance to comment on these changes.

DATES: The comment period for the NPRM published in the Federal Register on October 30, 2006 (71 FR 63272), is reopened.

The FAA must receive comments on this SNPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2006-26107; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this SNPRM, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Isabel Saltzman, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7649; email Isabel.L.Saltzman@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2006-26107; Project Identifier 2004-SW-30-AD” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposal.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this SNPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public

docket of this SNPRM. Submissions containing CBI should be sent to Isabel Saltzman, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7649; email Isabel.L.Saltzman@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Discussion

The FAA issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to all Sikorsky Aircraft Corporation Model S-61 A, D, E, and V helicopters; Croman Corporation Model SH-3H helicopters, Carson Helicopters, Inc. Model S-61L helicopters; and Siller Helicopters Model CH-3E and SH-3A helicopters. The NPRM published in the *Federal Register* on October 30, 2006 (71 FR 63272). The NPRM proposed to require creating a component history card or equivalent record and recording the hours time-in-service (TIS) and the external lift cycles (lift cycles) for each affected main gearbox input left and right freewheel unit (IFWU) assembly. The NPRM also proposed to require determining if the IFWU assembly is a repetitive external lift (REL) or non-REL IFWU assembly. The determination includes calculating a moving average of lift cycles per hour TIS at specified intervals on each IFWU assembly. For REL IFWU assemblies, the NPRM proposed to require repetitive inspections, which include visual and dimensional inspections, of the IFWU assembly for wear, surface distress, and endplay, recording certain information, and replacing affected parts with an airworthy part. In addition, the NPRM proposed to require permanently marking the REL IFWU camshafts and gear housings with the letters “REL” on the surface of these parts.

The NPRM was prompted by an accident in which the left and right IFWU assembly on a helicopter slipped or disengaged, resulting in both engines overspeeding, engine shutdowns, and loss of engine power to the transmissions. The FAA is proposing

this AD to address slipping of the main gearbox IFWU assembly, loss of engine power, and subsequent loss of control of the helicopter.

Actions Since the NPRM was Issued

Since the FAA issued the NPRM, the FAA determined that additional camshaft and gear housing part numbers need to be marked and the applicability and certain compliance times need clarification.

Comments

The FAA gave the public the opportunity to participate in developing this proposed AD. The FAA has considered the comments received.

Request to Fix Typographical Errors

Sikorsky Aircraft Corporation (Sikorsky) requested that the FAA fix two typographical errors. Sikorsky stated that in the third paragraph of the Discussion section in the NPRM, the citation for the alert service bulletin should read "... 61B35-67B ..." (not "61835-67B"), and the citation for the all operators letter should read "...CCS-61-AOL-04-0005" (not "CCS-61AOL-04-0005").

The FAA agrees with the request. The FAA has revised the citations accordingly.

Request to Revise Etching Language

Sikorsky requested that the etching language in paragraph (d) of the proposed AD (in the NPRM) (referred to as paragraph (j) of this proposed AD (in the SNPRM)) be revised from "After etching neutralize the etched surface with oil to prevent corrosion" to the following: "After etching, neutralize the etched surface and oil to prevent corrosion."

The FAA agrees with the request. The FAA has also clarified the compliance time by specifying "Before further flight and after etching, neutralize the etched surface and oil to prevent corrosion" in paragraph (j) of this proposed AD.

Request to Add Camshaft and Gear Housing Part Numbers

Sikorsky requested that the FAA add camshaft and gear housing part numbers to the “Compliance” section of the proposed AD. Sikorsky stated that additional IFWU camshaft part numbers 61350-24052 and 61350-24072 have been delivered in military versions of the S-61 and should be included on the assumption that some of these aircraft have been or may become certificated. Sikorsky also stated that additional IFWU gear housing part numbers 61350-24051 and 61350-24068 have been delivered in military versions of the S-61 and should be included on the assumption that some of these aircraft have been or may become certificated.

The FAA agrees. Paragraph (j) of this proposed AD has been revised accordingly.

Request to Require Installation of Redesigned IFWUs

Croman Corporation stated a redesigned #2 IFWU could be installed in the commercial gear box with minimal modifications, mostly to the oil system. The FAA infers that the commenter is requesting that the proposed AD require installing redesigned #2 IFWUs in lieu of accomplishing the proposed actions (i.e., creating a component history card or equivalent record and recording the hours TIS and the lift cycles for each affected main gearbox IFWU assembly; determining if the IFWU assembly is a REL or non-REL assembly; for REL IFWU assemblies, repetitive inspections of the IFWU assembly for wear, surface distress, and endplay, recording certain information, and replacing affected parts; and permanently marking the REL IFWU camshafts and gear housings).

The FAA does not concur. The FAA has determined that the proposed actions adequately address the identified unsafe condition. However, the FAA might consider

additional rulemaking if sufficient data is submitted to substantiate requiring the replacement of the IFWUs in lieu of doing the proposed actions.

Clarification of the Model Designations

The applicability of the proposed AD (in the NPRM) refers to Model S-61 A, D, E, V, SH-3H, S-61L; CH-3E, and SH-3A helicopters. The FAA has revised the applicability of this proposed AD (in the SNPRM) to refer to the model designations as specified in the most recent U.S. type certificate data sheet: Carson Helicopters, Inc., Model S-61L helicopters; Carson Helicopters, Inc., Model SH-3H helicopters; Croman Corporation Model SH-3H helicopters; Sikorsky Aircraft Corporation Model S-61A, S-61D, S-61E, and S-61V helicopters; Siller Helicopters Model CH-3E helicopters; and Siller Helicopters Model SH-3A helicopters.

Clarification of Certain Compliance Times

The FAA has clarified the compliance times specified in paragraphs (g), (h)(1), (i)(1), and (j) of this proposed AD.

Related Service Information under 1 CFR Part 51

The FAA reviewed Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003. This service information describes, among other actions, procedures for inspections, which includes visual and dimensional inspections, of the IFWU assembly for wear, surface distress, and endplay, and for recording certain information. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed Sikorsky Aircraft Corporation All Operators Letter (AOL) CCS-61-AOL-04-0005, dated May 18, 2004. This service information provides an

example and additional information about tracking cycles and the moving average procedure.

The FAA also reviewed Sikorsky Aircraft S-61L/N Overhaul Manual, SA4045-83, Revision 20, dated August 15, 2003, as revised by Temporary Revisions 65-193, -194, -195, and -196, which contains the overhaul procedures for the IFWU assembly.

FAA's Determination

The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design. Certain changes described above expand the scope of the NPRM. As a result, the FAA has determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

Proposed Requirements of this SNPRM

This SNPRM would require creating a component history card or equivalent record and recording the hours TIS and the lift cycles for each affected main gearbox IFWU assembly; determining if the IFWU assembly is a REL or non-REL assembly; for REL IFWU assemblies, repetitive inspections of the IFWU assembly for wear, surface distress, and endplay, recording certain information, and replacing affected parts; and permanently marking the REL IFWU camshafts and gear housings.

Differences Between this Proposed AD and the Service Information

The effectivity of Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003, includes Model S-61 L, N, NM, and R helicopters. However, for those helicopters, the unsafe condition is addressed in AD 2007-01-05, Amendment 39-14876 (72 FR 1139, January 10, 2007). Therefore, those helicopters are not included in the applicability of this proposed AD.

Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003, specifies contacting Sikorsky and providing information to Sikorsky. This proposed AD does not require you to contact Sikorsky or provide information to Sikorsky.

Costs of Compliance

The FAA estimates that this proposed AD affects 55 helicopters of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Creating history card; determining type of IFWU assembly; inspecting IFWU assemblies; recording information; replacing parts; and marking certain parts	Up to 8 work-hours X \$85 per hour = \$680	Up to \$1,975	Up to \$2,655	Up to \$146,025

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Carson Helicopters, Inc.; Croman Corporation; Sikorsky Aircraft Corporation; and Siller Helicopters: Docket No. FAA-2006-26107; Project Identifier 2004-SW-30-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected Airworthiness Directives (ADs)

None.

(c) Applicability

This AD applies to all helicopters identified in paragraphs (c)(1) through (6) of this AD, certificated in any category including restricted.

(1) Carson Helicopters, Inc., Model S-61L helicopters.

(2) Carson Helicopters, Inc., Model SH-3H helicopters.

(3) Croman Corporation Model SH-3H helicopters.

(4) Sikorsky Aircraft Corporation Model S-61A, S-61D, S-61E, and S-61V helicopters.

(5) Siller Helicopters Model CH-3E helicopters.

(6) Siller Helicopters Model SH-3A helicopters.

(d) Subject

Joint Aircraft System Component (JASC) Code 6310, Engine/Transmission Coupling.

(e) Unsafe Condition

This AD was prompted by an accident in which the left and right input freewheel unit (IFWU) assembly on a helicopter slipped or disengaged, resulting in both engines overspeeding, engine shutdowns, and loss of engine power to the transmissions. The FAA is issuing this AD to address slipping of the main gearbox IFWU assembly, loss of engine power, and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Creation of History Card or Equivalent and Daily Actions

Within 10 hours time-in-service (TIS) after the effective date of this AD, do the actions specified in paragraphs (g)(1) and (2) of this AD.

(1) Create an external lift component history card or equivalent record for each IFWU assembly, part number (P/N) 61074-35000-041 through 61074-35000-063 inclusive.

(2) Count and, at the end of each day's operations, record the number of external lift cycles (lift cycles) performed and the hours TIS for each IFWU assembly, P/N 61074-35000-041 through 61074-35000-063 inclusive. A "lift cycle" is defined as the lifting of an external load and subsequent release of the load. Record the lift cycles and hours TIS on the external lift component history card or equivalent record.

(h) Determination of IFWU Assembly Type and Calculations

(1) Upon reaching 250 hours TIS after the effective date of this AD on each IFWU assembly, P/N 61074-35000-041 through 61074-35000-063 inclusive, determine whether the IFWU assembly is a repetitive external lift (REL) or non-REL IFWU assembly by using a 250-hour TIS moving average. To perform the calculation, divide the total number of lift cycles performed during the first 250 hours TIS by 250. The result will be the first moving average calculation of lift cycles per hour TIS.

(i) If the calculation specified in paragraph (h)(1) of this AD results in more than 6 lift cycles per hour TIS, the IFWU assembly is an REL IFWU assembly.

(ii) If the calculation specified in paragraph (h)(1) of this AD results in 6 or less lift cycles per hour TIS, the IFWU assembly is a Non-REL IFWU assembly.

(2) For each IFWU assembly determined to be a Non-REL IFWU assembly based on the first calculation of the 250-hour TIS moving average for lift cycles specified in paragraph (h)(1) of this AD: Within 50 hours TIS after the determination, and thereafter at intervals of 50 hours TIS, recalculate the average lift cycles per hour TIS to determine

whether the IFWU assembly is an REL or non-REL IFWU assembly. To perform the calculation, subtract the total number of lift cycles performed during the first 50-hour TIS interval used in the previous moving average calculation from the total number of lift cycles performed on the IFWU assembly during the previous 300 hours TIS. Divide this result by 250. The result will be the next or subsequent moving average calculation of lift cycles per hour TIS.

(i) If any calculation specified in paragraph (h)(2) of this AD results in more than 6 lift cycles per hour TIS, the IFWU assembly is an REL IFWU assembly.

(ii) If any calculation specified in paragraph (h)(2) of this AD results in 6 or less lift cycles per hour TIS, the IFWU assembly is a Non-REL IFWU assembly.

Note 1 to paragraph (h)(2): Sikorsky Aircraft Corporation All Operators Letter (AOL) CCS-61-AOL-04-0005, dated May 18, 2004, provides an example and additional information about tracking cycles and the moving average procedure.

Note 2 to paragraph (h)(2): The following is a sample calculation for subsequent 50 hour TIS intervals. Assume the total number of lift cycles for the first 50 hour TIS interval used in the previous moving average calculation = 450 lift cycles and the total number of lift cycles for the previous 300 hours TIS = 2,700 lift cycles. The subsequent moving average of lift cycles per hour TIS = $(2,700 - 450)$ divided by 250 = 9 lift cycles per hour TIS.

(3) Once an IFWU assembly is determined to be an REL IFWU assembly, it remains an REL IFWU assembly for the rest of its service life and is subject to the inspection for REL IFWU assemblies required by paragraph (i) of this AD.

(4) Once an IFWU assembly is determined to be an REL IFWU assembly, you no longer need to perform the 250-hour TIS moving average calculation required by paragraph (h)(2) of this AD, but you must continue to count and record the lift cycles as required by paragraph (g)(2) of this AD.

(i) Repetitive Inspections of REL IFWU Assemblies and Replacement

For each REL IFWU assembly, as determined by paragraph (h)(1) or (2) of this AD:

(1) Within 500 hours TIS or 7,500 lift cycles, whichever occurs first since the assembly was determined to be a REL IFWU assembly, and thereafter at intervals not to exceed 500 hours TIS or 7,500 lift cycles, whichever occurs first, inspect for wear, surface distress, and endplay by following paragraphs B.(1) through B.(6) of the Accomplishment Instructions of Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003. Record all the information specified in Figures 1 through 3 of the Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003. You may record this information on any suitable maintenance record, or you may use the Sikorsky evaluation forms provided in Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003. This AD does not require you to contact Sikorsky or provide information to Sikorsky.

(2) If during any inspection required by paragraph (i)(1) of this AD, any IFWU assembly part is found whose average wear, wear marks, surface distress, or endplay exceeds the limits specified in paragraphs B.(1) through B.(6) of the Accomplishment Instructions of Sikorsky Aircraft Corporation Alert Service Bulletin 61B35-67B, Revision B, dated August 11, 2003, before further flight, replace the affected part with an airworthy IFWU assembly part.

Note 3 to paragraph (i)(2): Sikorsky Aircraft S-61L/N Overhaul Manual, SA4045-83, Revision 20, dated August 15, 2003, as revised by Temporary Revisions 65-193, -194, -195, and -196, contains the overhaul procedures for the IFWU assembly.

(j) Part Marking

For each REL IFWU assembly, as determined by paragraph (h)(1) or (2) of this AD: Before further flight after the assembly was determined to be an REL IFWU assembly, permanently mark IFWU camshafts, P/N 61350-24052, 61350-24072, S6135-20611, S6135-20614 and S6137-23075, and IFWU gear housings, P/N 61350-24051, 61350-24068, S6135-20695, and S6137-23057, with the letters “REL”. Mark the camshafts by applying etching ink on the surface of the part that is 0.5-inch square with the depth of the letters not to exceed 0.001 inch. Before further flight and after etching, neutralize the etched surface and oil to prevent corrosion.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Strategic Policy Rotorcraft Section, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Strategic Policy Rotorcraft Section, send it to: Manager, Strategic Policy Rotorcraft Section, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110. Information may be emailed to: 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

(1) For more information about this AD, contact Isabel Saltzman, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7649; email Isabel.L.Saltzman@faa.gov.

(2) For service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky’s Service Engineering Group at Sikorsky Aircraft

Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

Issued on March 8, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-05150 Filed: 3/12/2021 8:45 am; Publication Date: 3/15/2021]